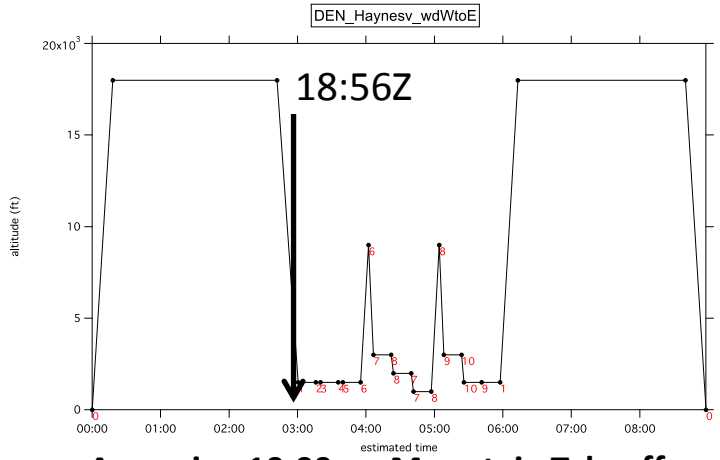
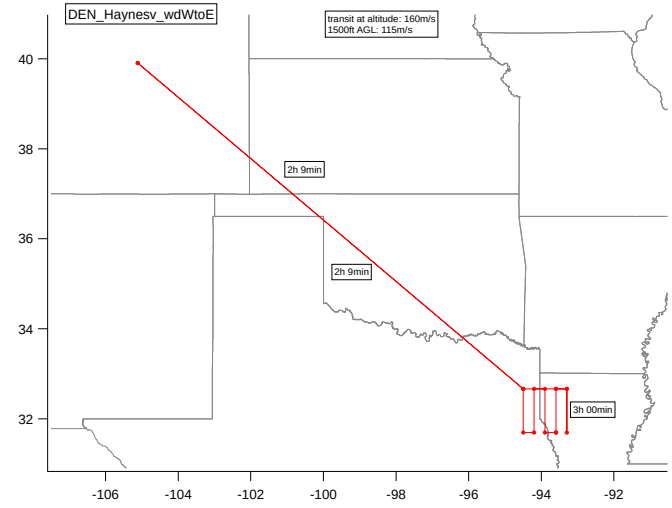
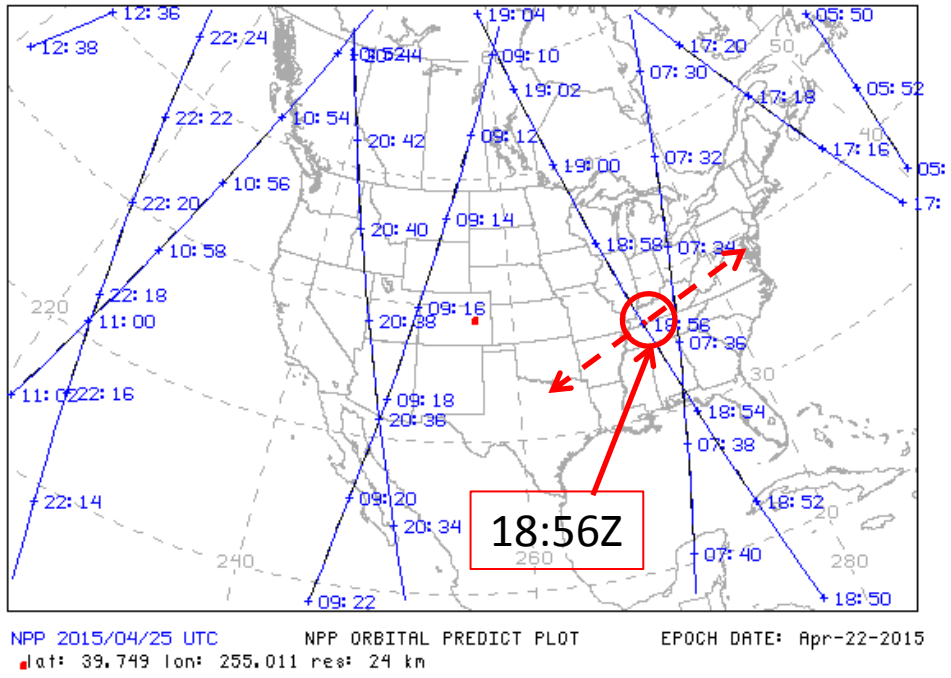
RAQMS 20150425 SONGNEX
30hr FX for 18Z April 25 (Haynesville) and
78hr FX for 18Z April 27
(Utah, Wyoming, Colorado), 2015



Assuming 10:00am Mountain Takeoff



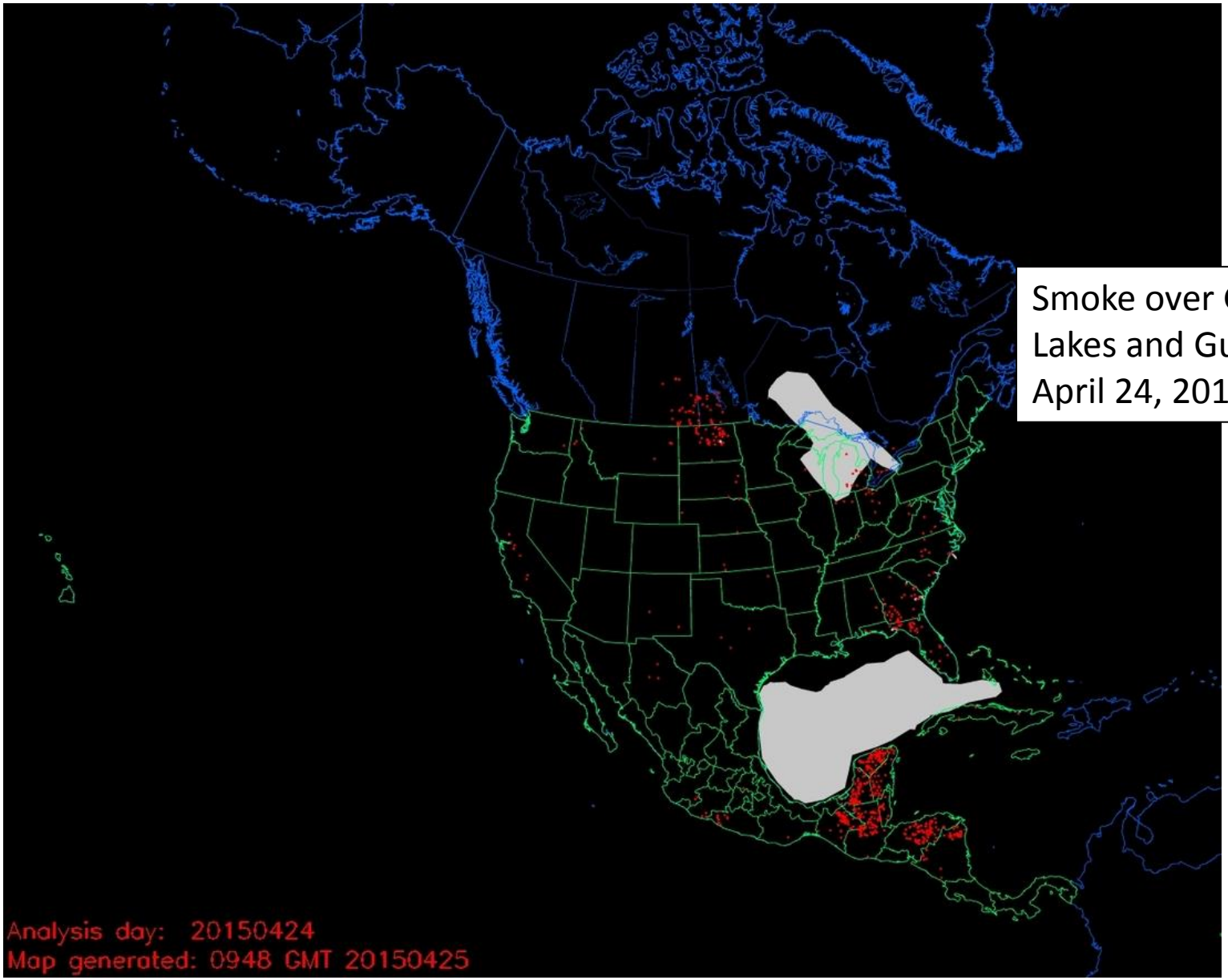
S-NPP Validation: Haynesville Shale 04/25



Excellent Validation Opportunity!

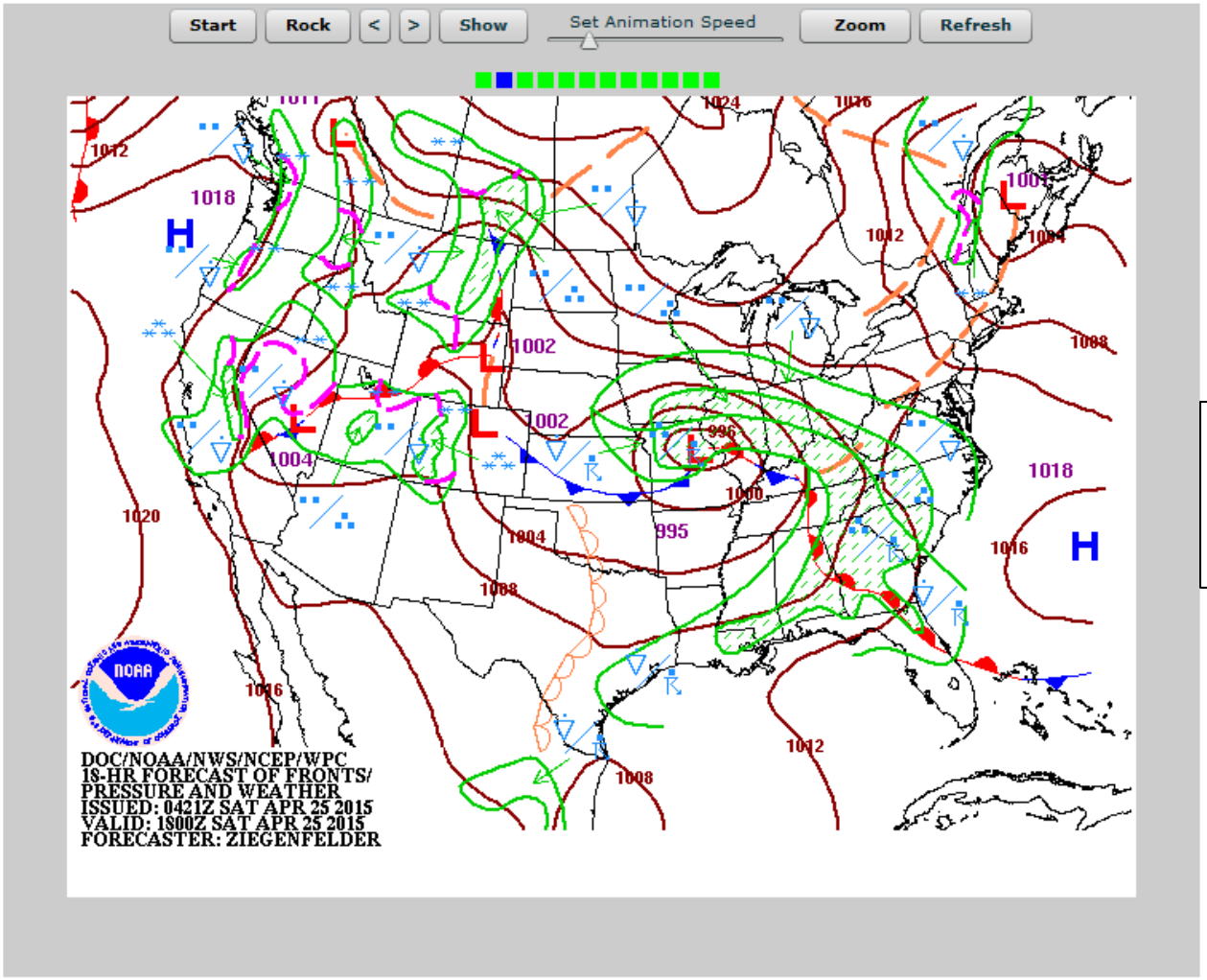
NESDIS Hazard Mapping System (HMS)

http://www.ospo.noaa.gov/data/land/fire/currenthms.jpg



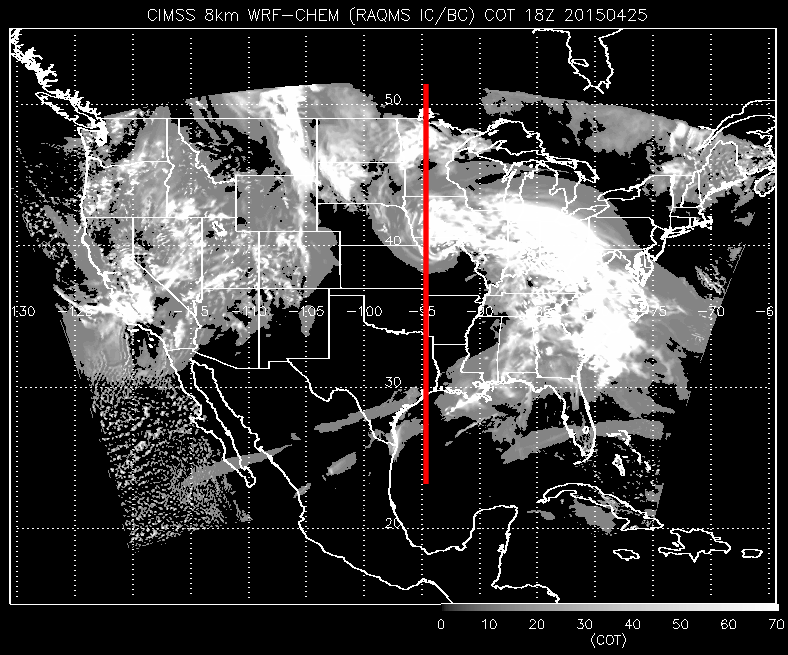
Smoke over Great Lakes and Gulf on April 24, 2015

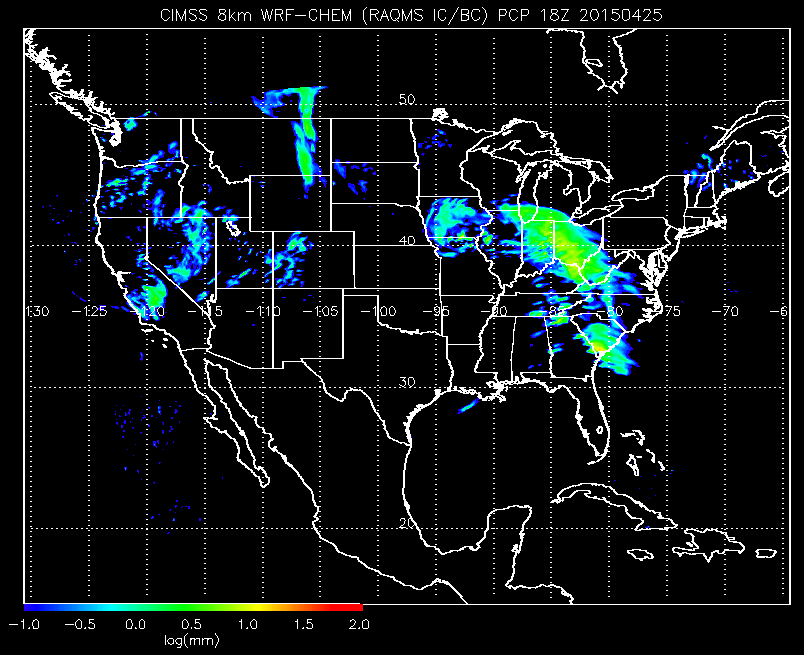
18hr NCEP/WPC forecast valid 18Z 04/25/2015



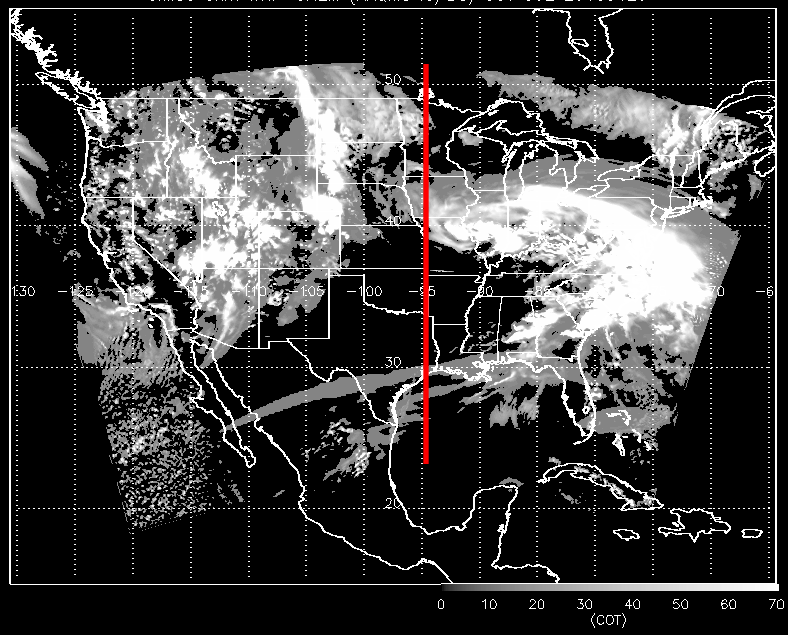
Rain south of Haynesville Shale

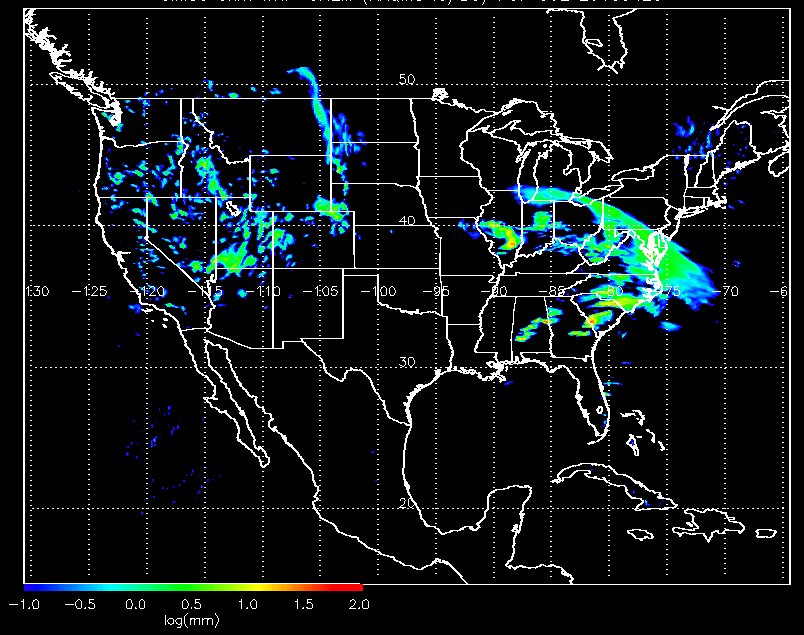
http://www.hpc.ncep.noaa.gov/basicwx/day0-7loop.html

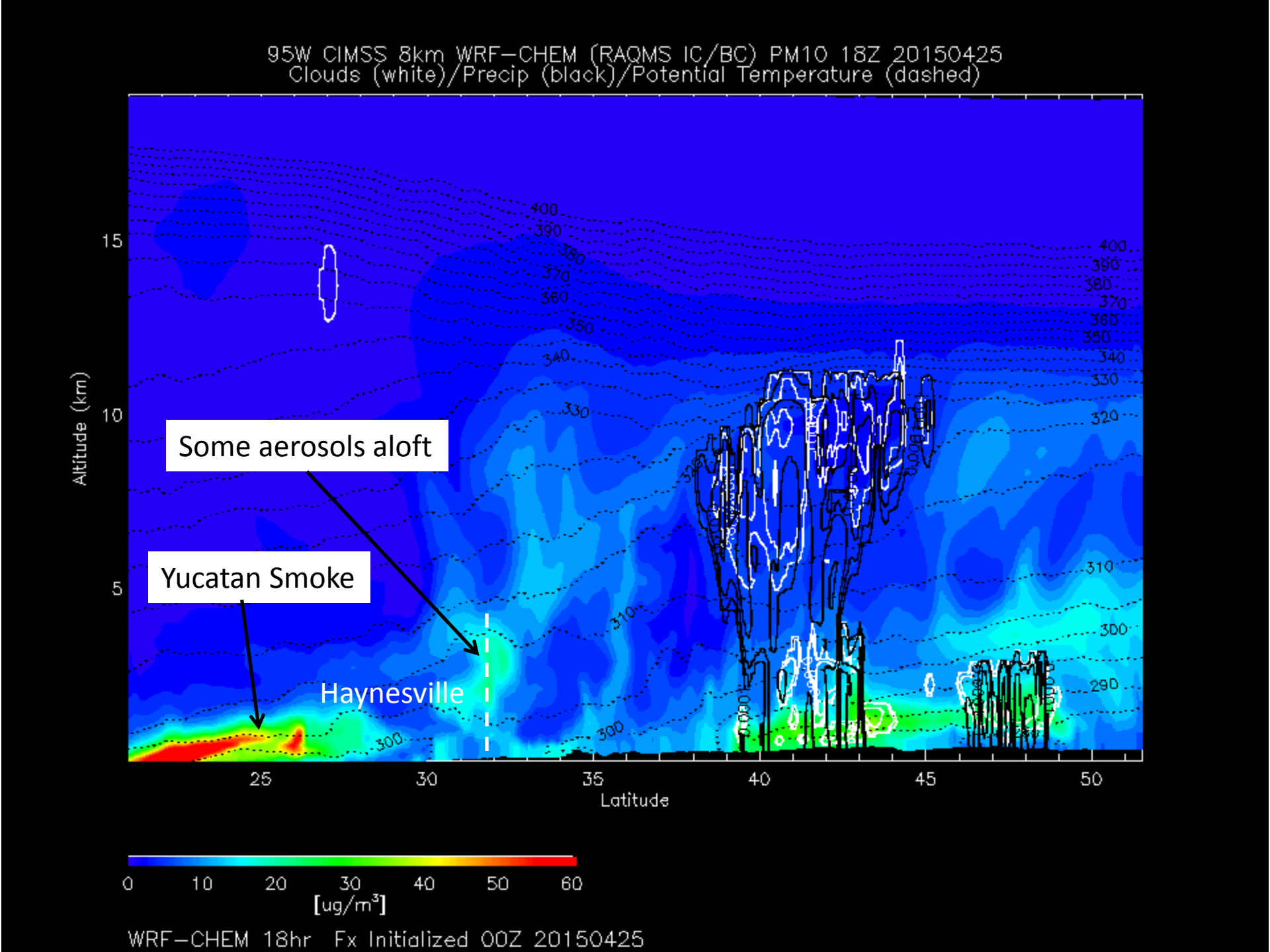


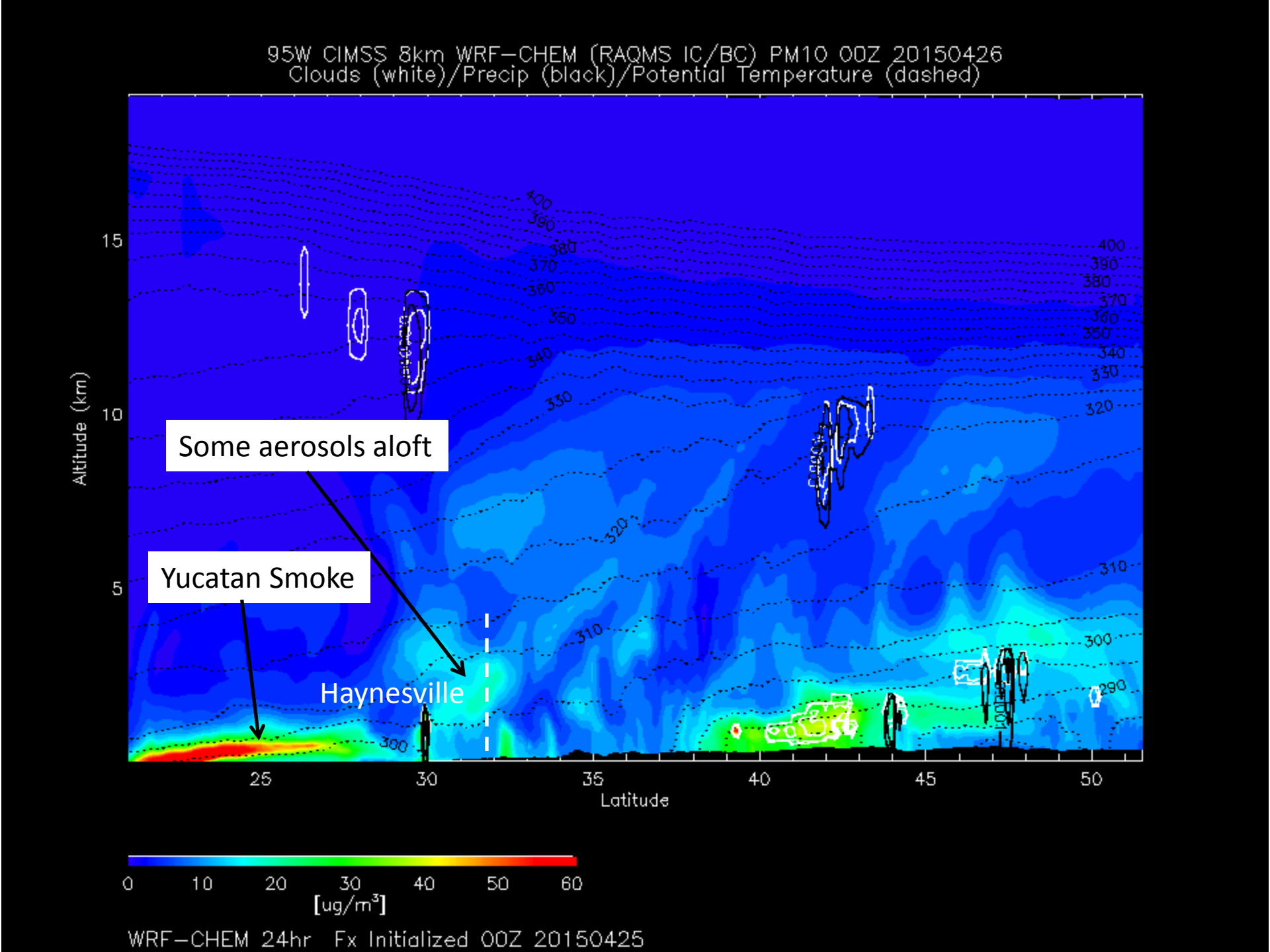


Clear over Haynesville Shale this afternoon

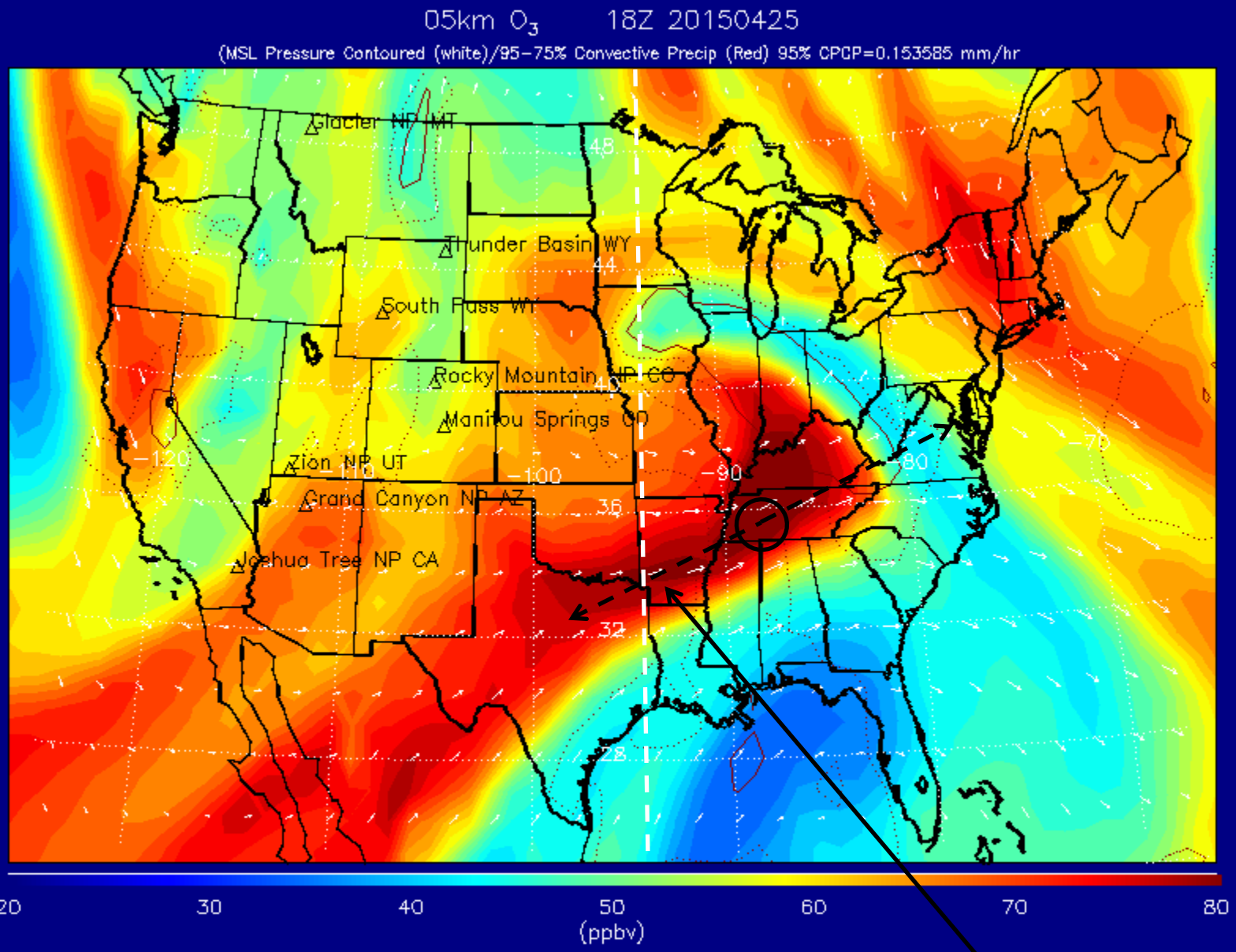





95W CIMSS 8km WRF-CHEM (RAQMS IC/BC) PM10 18Z 20150425
Clouds (white)/Precip (black)/Potential Temperature (dashed)
Some aerosols aloft
Yucatan Smoke
Haynesville
Altitude (km)
15
10
5
25
30
35
40
45
50
Latitude
0
10
20
30
40
50
60
[ug/m3]
WRF-CHEM 18hr Fx Initialized 00Z 20150425


95W CIMSS 8km WRF-CHEM (RAQMS IC/BC) PM10 00Z 20150426
Clouds (white)/Precip (black)/Potential Temperature (dashed)
Some aerosols aloft
Yucatan Smoke
Haynesville
Altitude (km)
15
10
5
25
30
35
40
45
50
Latitude
0
10
20
30
40
50
60
[ug/m3]
WRF-CHEM 24hr Fx Initialized 00Z 20150425

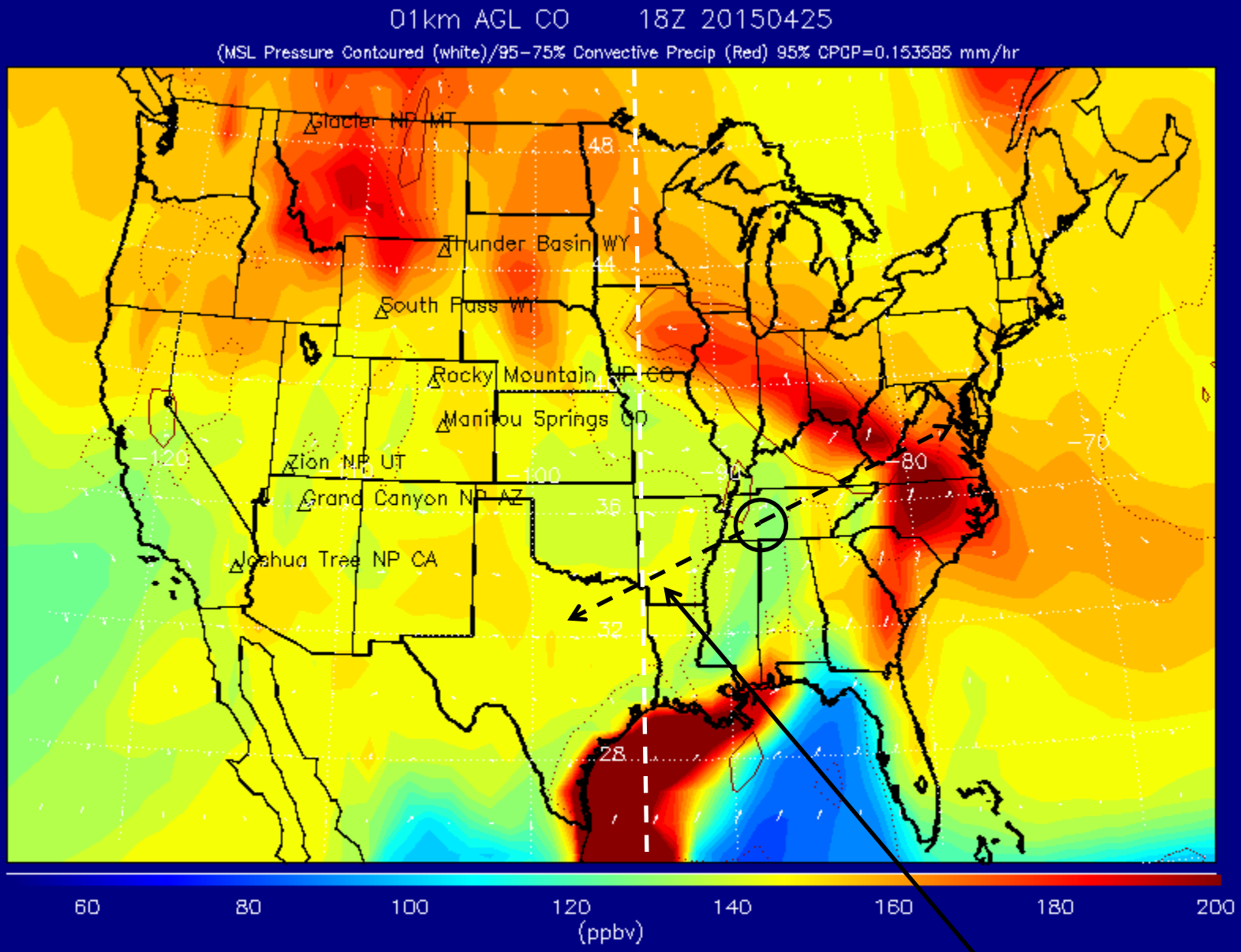
http://raqms.ssec.wisc.edu/forecast/view/20150424



Haynesville on western side of swath

Approximate swath width

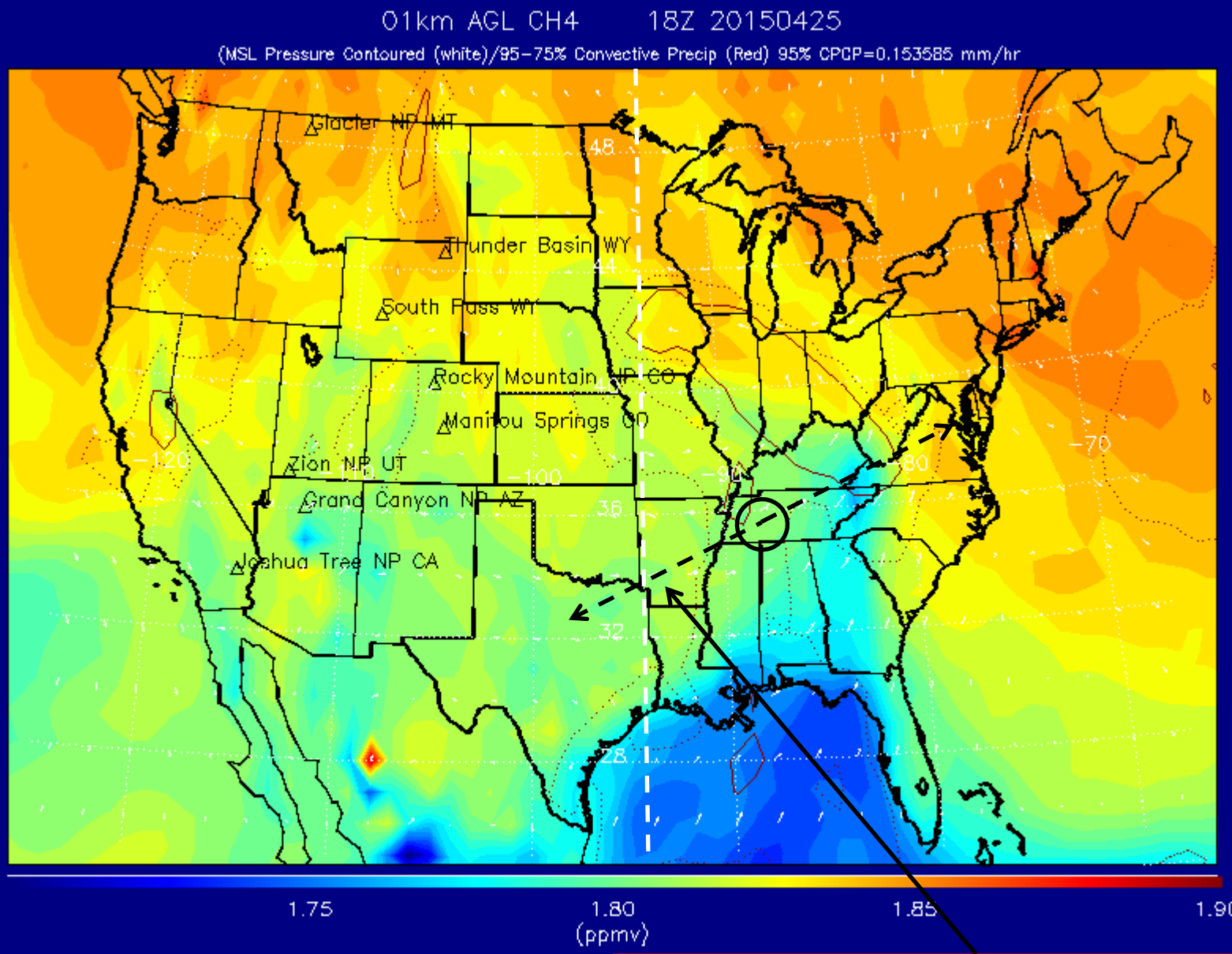
http://raqms.ssec.wisc.edu/forecast/view/20150424



Haynesville on western side of swath

Approximate swath width

http://raqms.ssec.wisc.edu/forecast/view/20150424

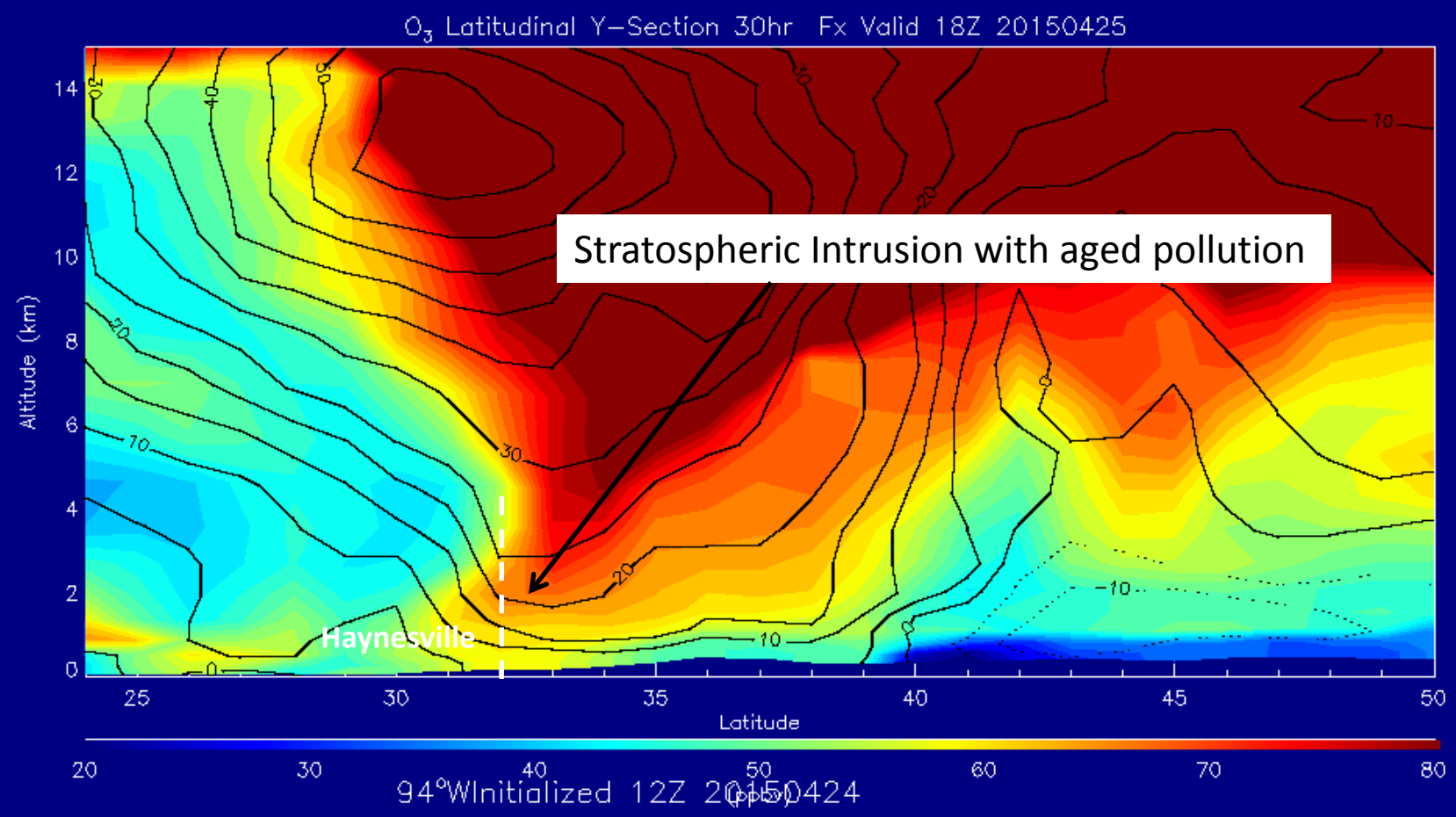


Haynesville on western side of swath

RAQMS surface CH4 constrained with 1990 mixing ratio – introduces ~0.1ppmv low bias

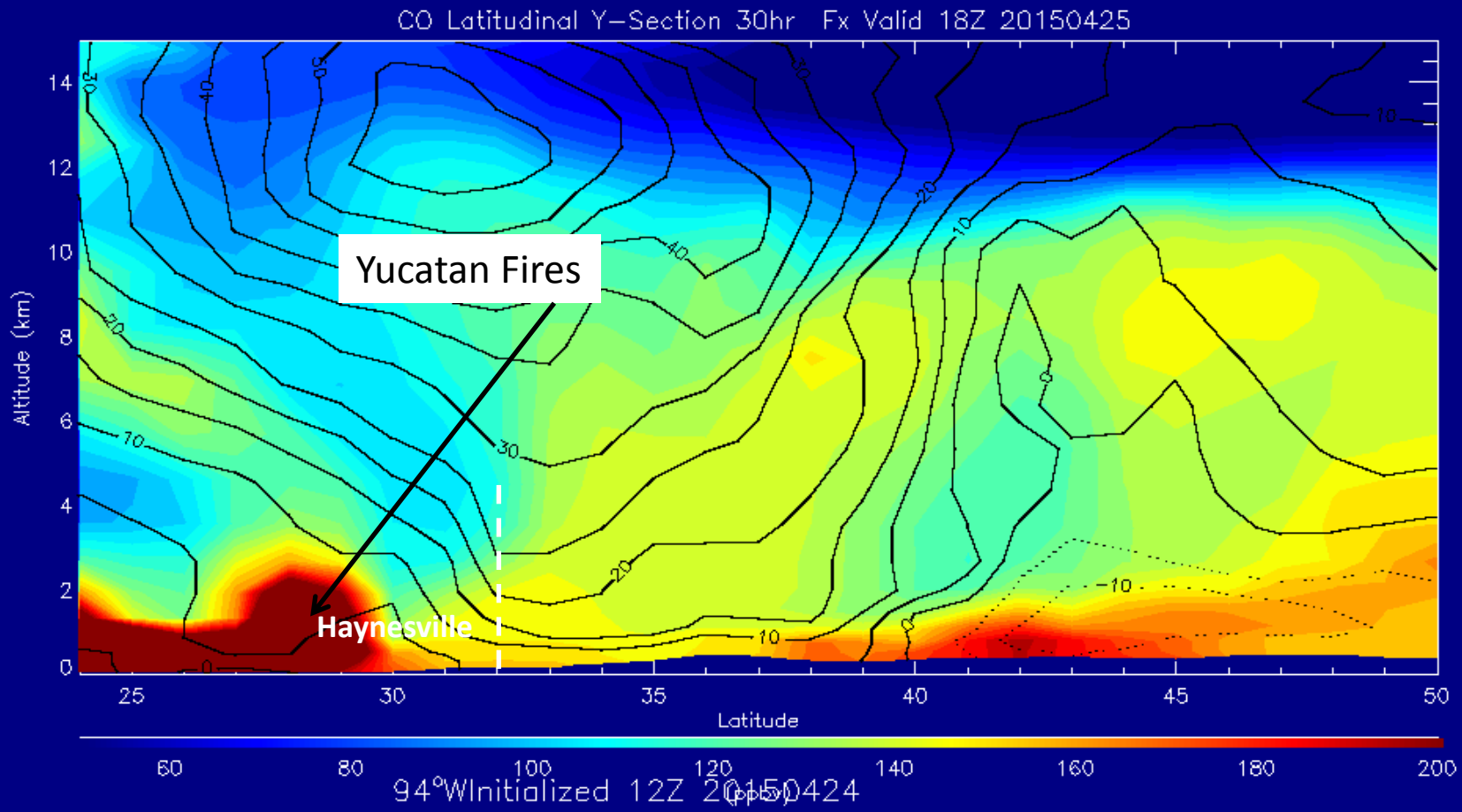
http://raqms.ssec.wisc.edu/forecast/view/20150424

RAQMS 30hr FX O3 Cross-section at 94W (Haynesville Shale)



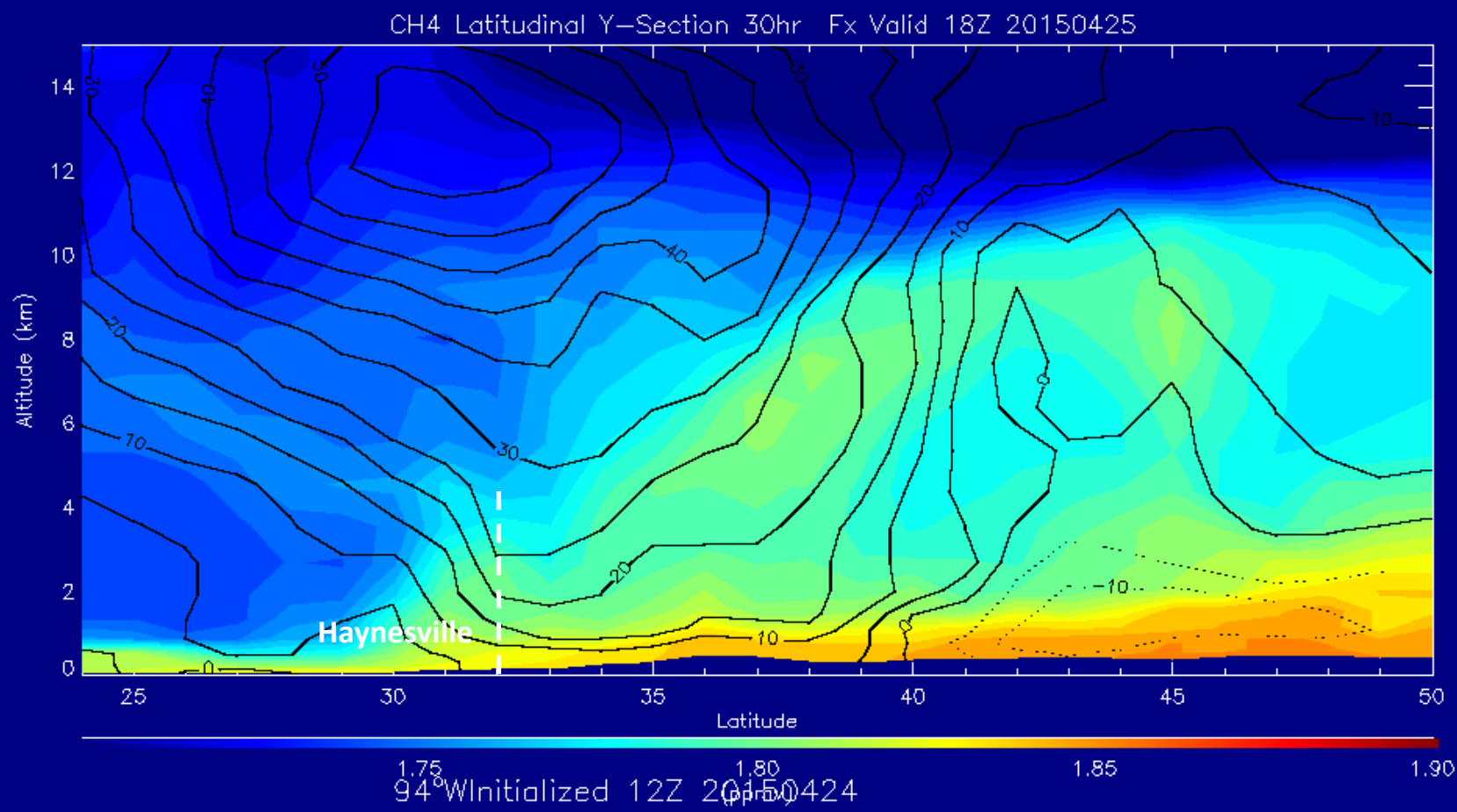
http://raqms.ssec.wisc.edu/forecast/view/20150424

RAQMS 30hr FX CO Cross-section at 94W (Haynesville Shale)



http://raqms.ssec.wisc.edu/forecast/view/20150424

RAQMS 30hr FX CH4 Cross-section at 94W (Haynesville Shale)

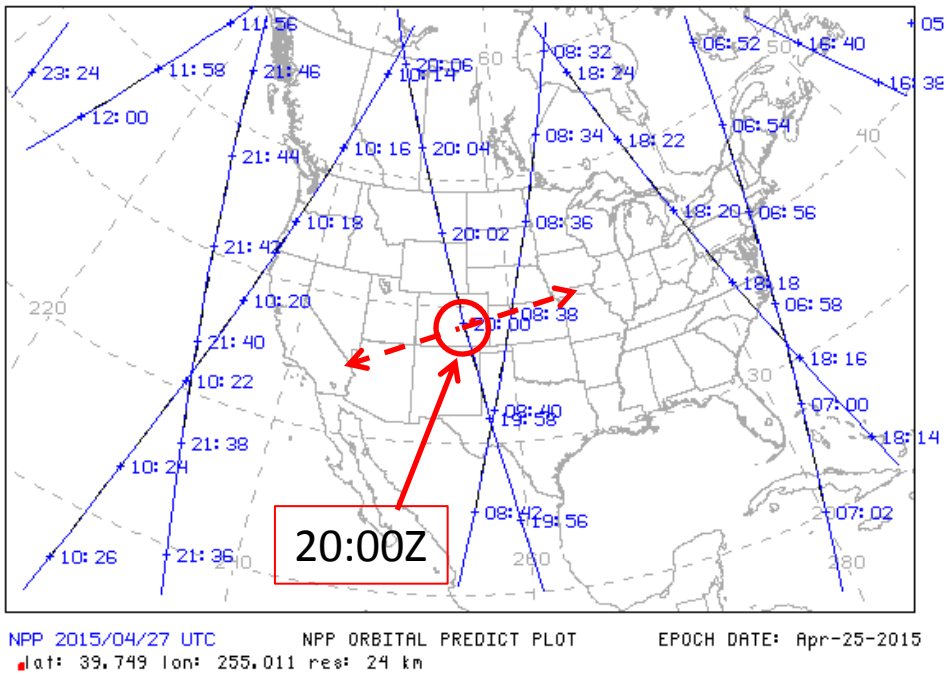


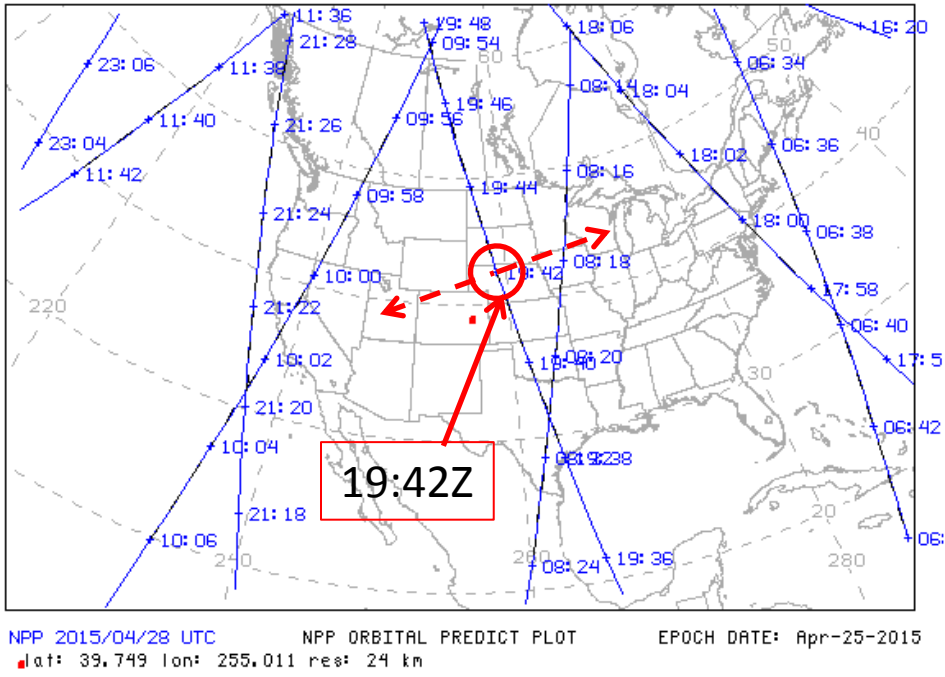
RAQMS surface CH4 constrained with 1990 mixing ratio – introduces ~0.1ppmv low bias

S-NPP (CrIS) overpass on 2015/04/27 and 2015/04/28

NUCAPS CO2, O3, CO, CH4 Validation Opportunity

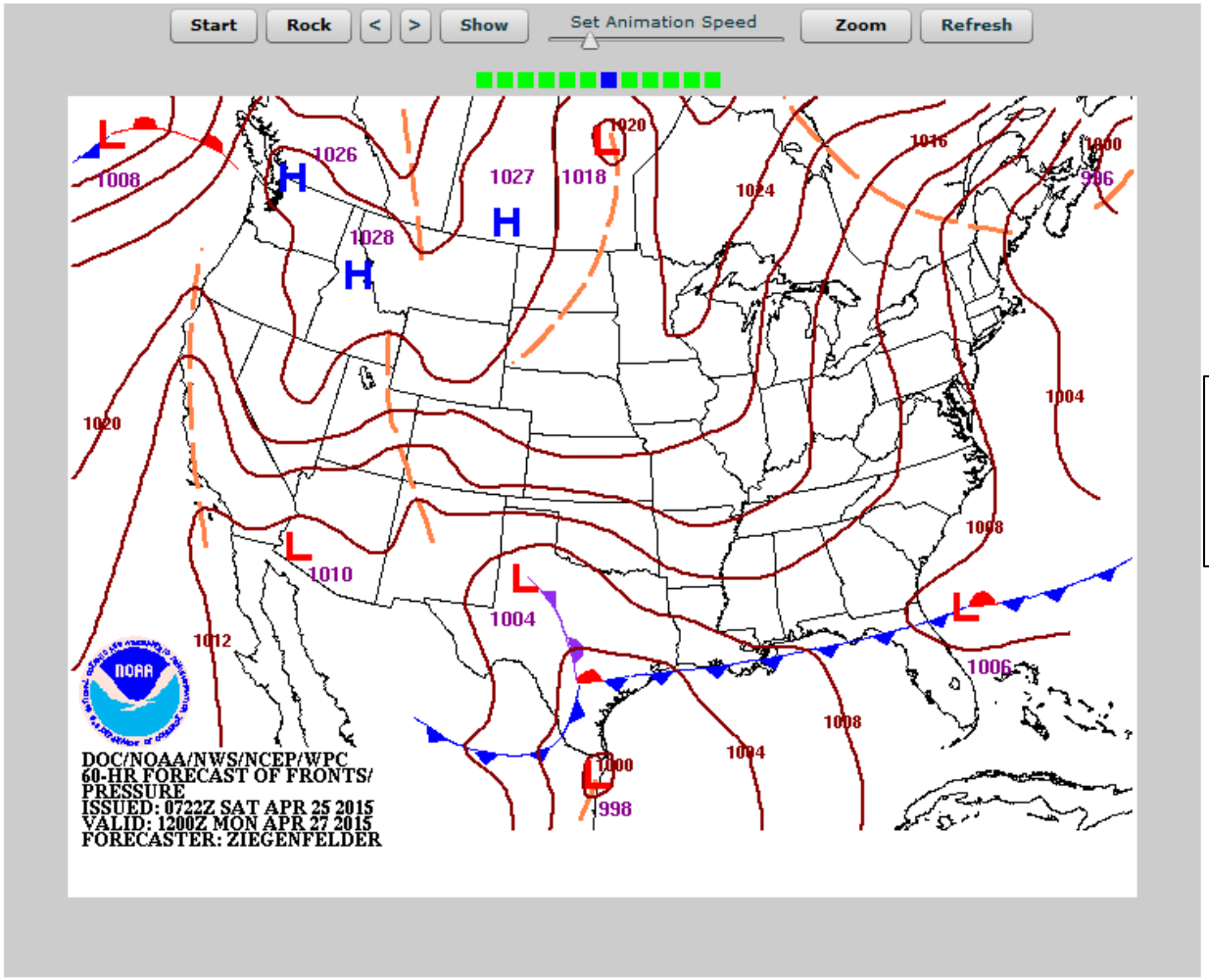
Nadir (27) and Western (28) swath





Approximate swath width

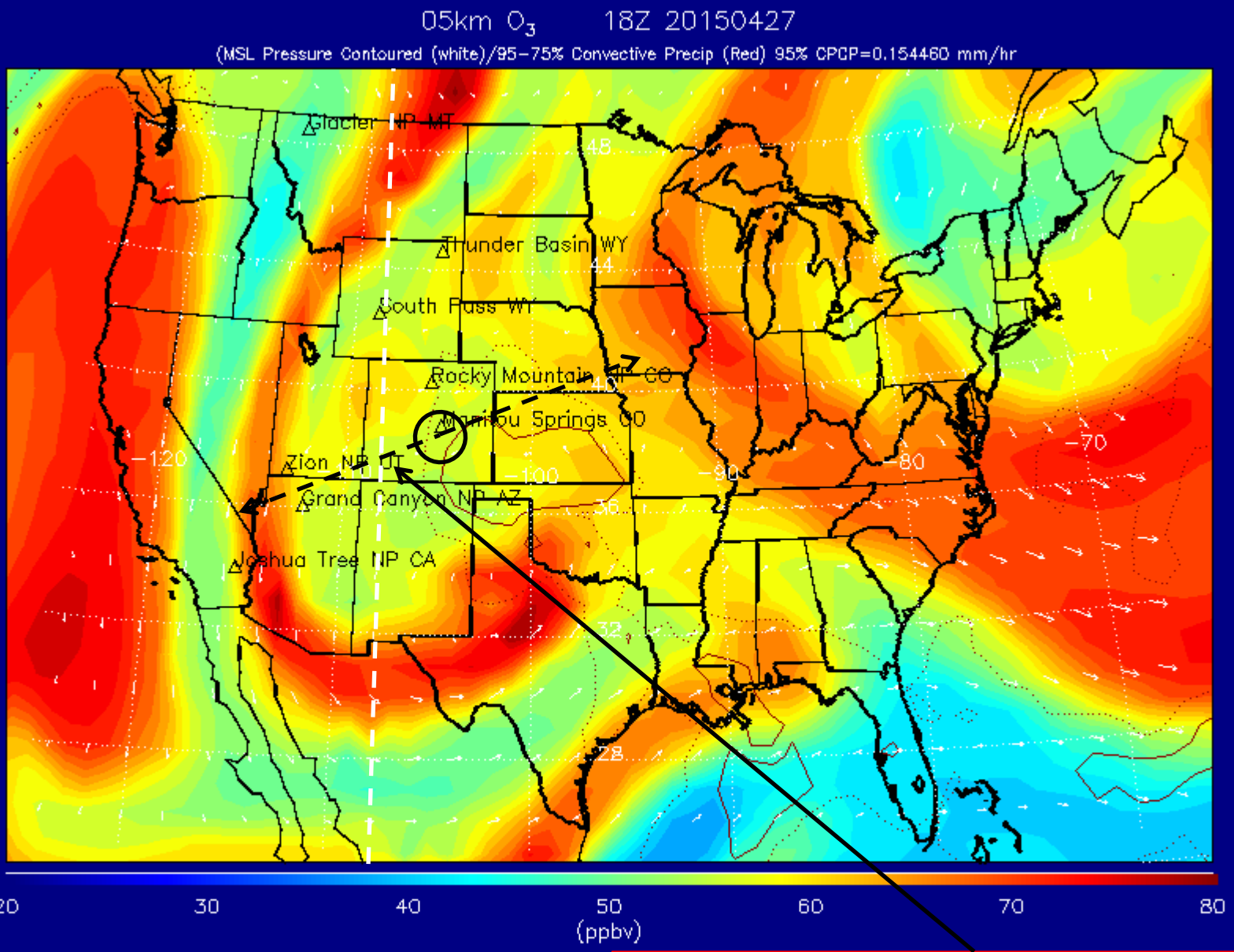
60hr NCEP/WPC forecast valid 12Z 04/27/2015



Trough axis over 4-Corners Region

http://www.hpc.ncep.noaa.gov/basicwx/day0-7loop.html

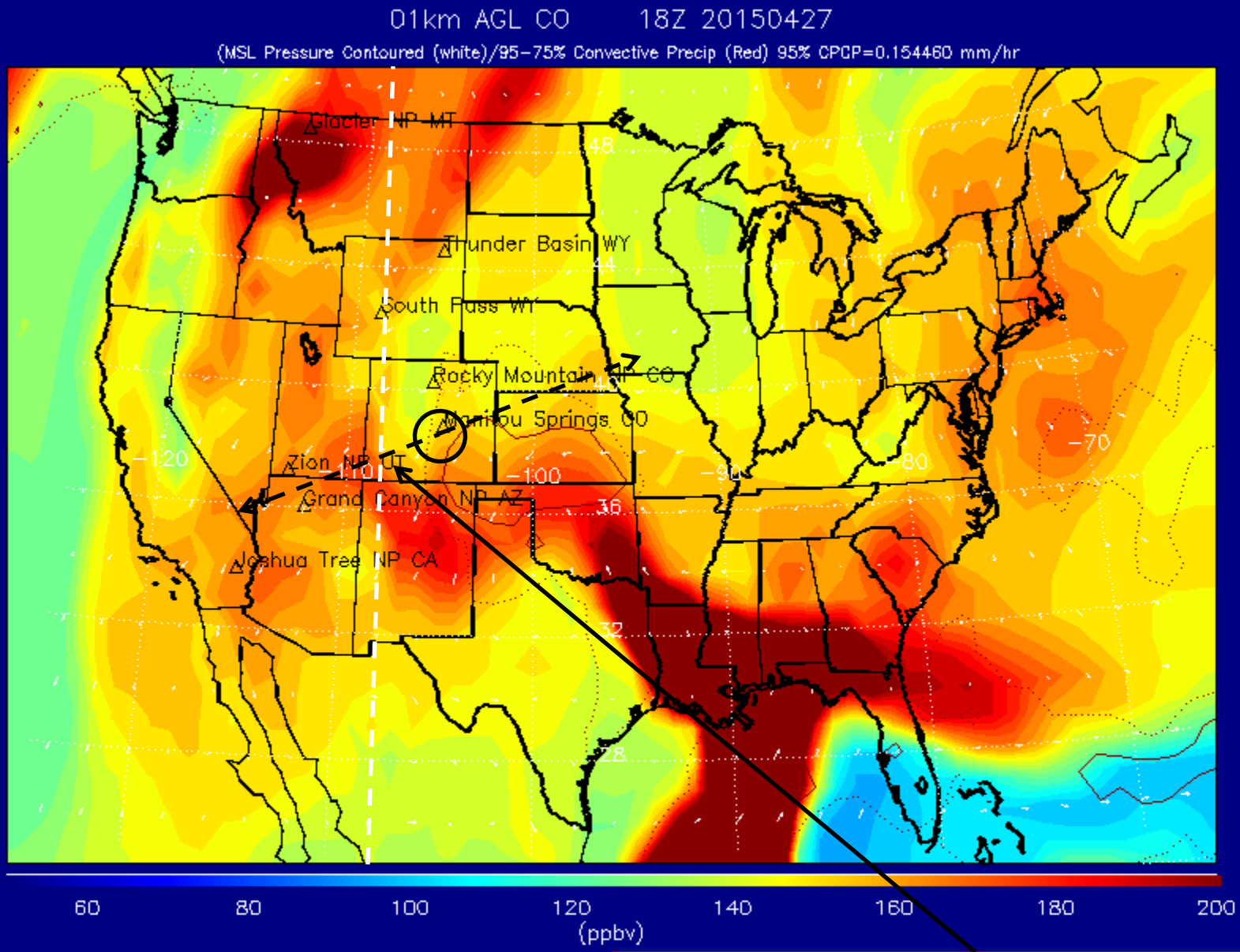
http://raqms.ssec.wisc.edu/forecast/view/20150424



Western Colorado on Western side of swath

Approximate swath width

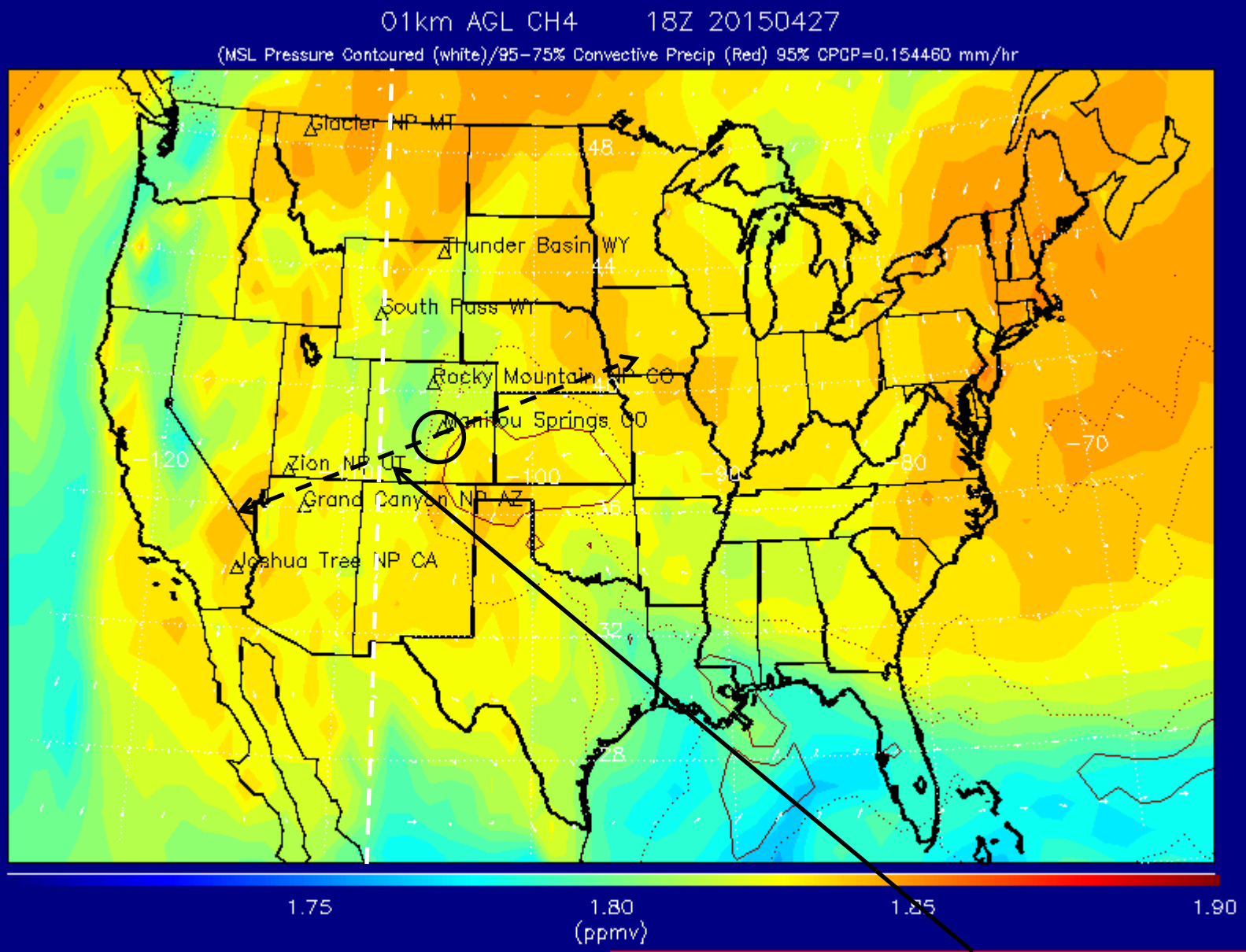
http://raqms.ssec.wisc.edu/forecast/view/20150424



Western Colorado on Western side of swath

Approximate swath width

http://raqms.ssec.wisc.edu/forecast/view/20150424

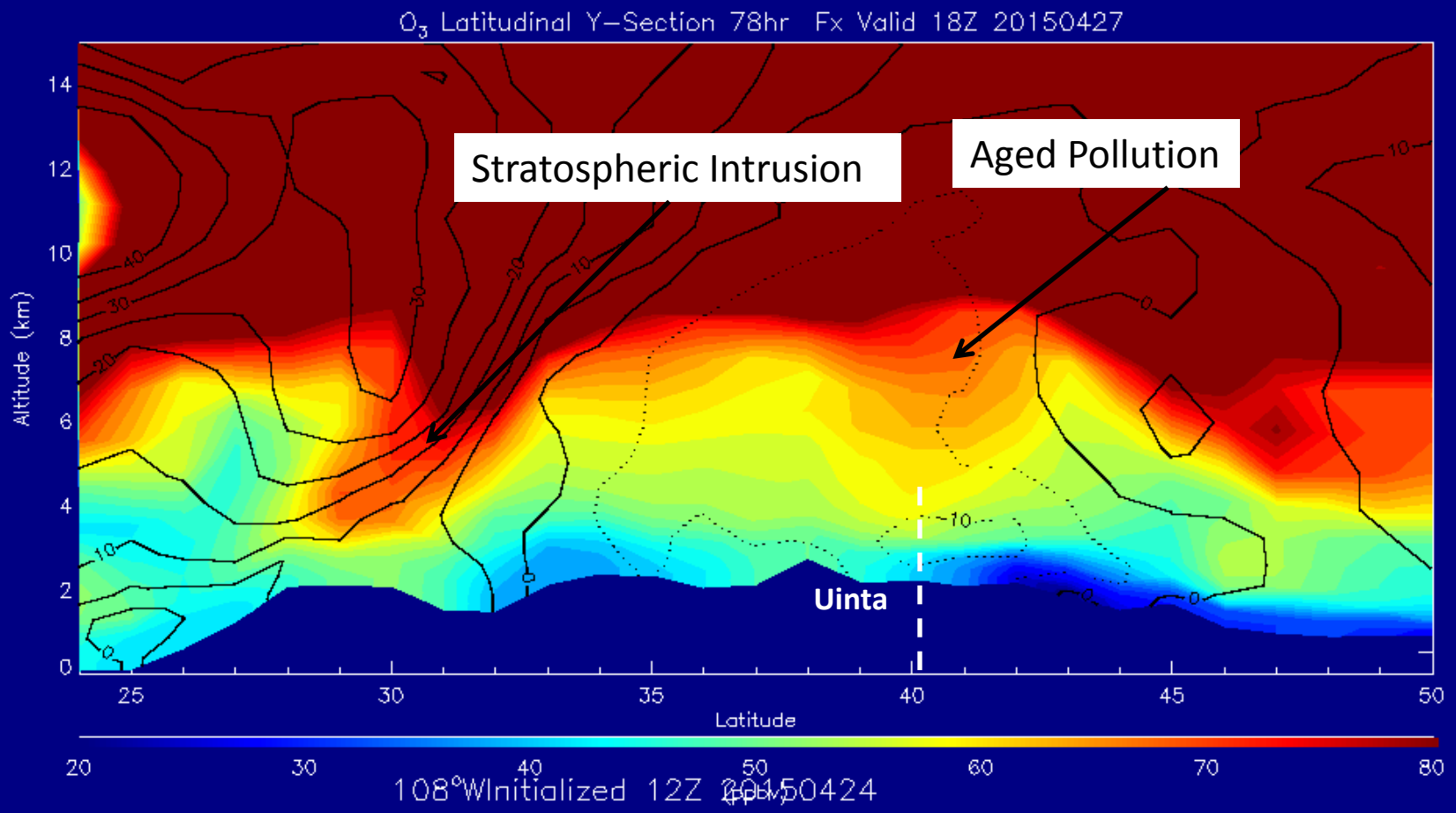


Western Colorado on Western side of swath

RAQMS surface CH4 constrained with 1990 mixing ratio – introduces ~0.1ppmv low bias

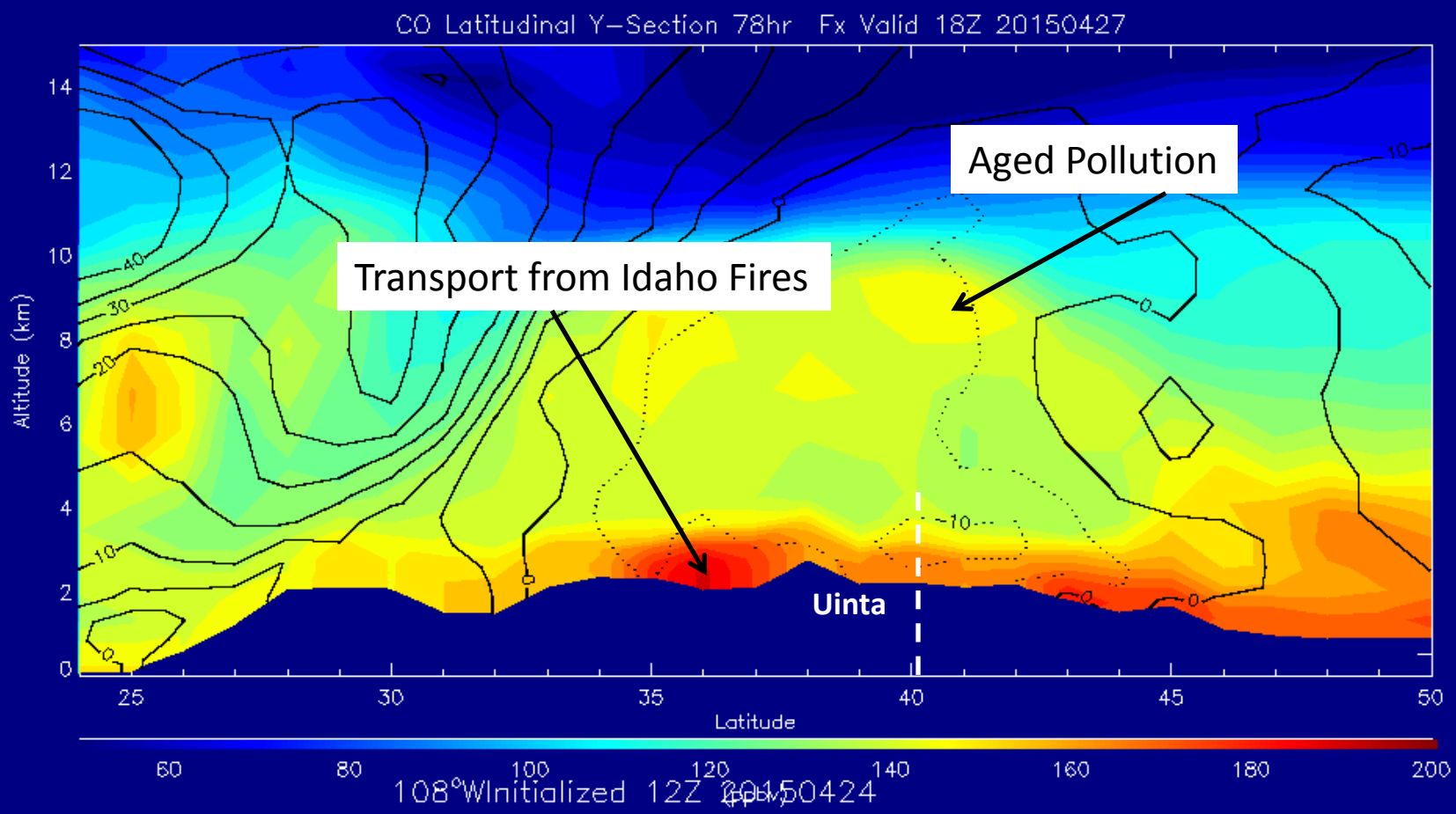
http://raqms.ssec.wisc.edu/forecast/view/20150424

RAQMS 78hr FX O3 Cross-section at 108W (Western Colorado)



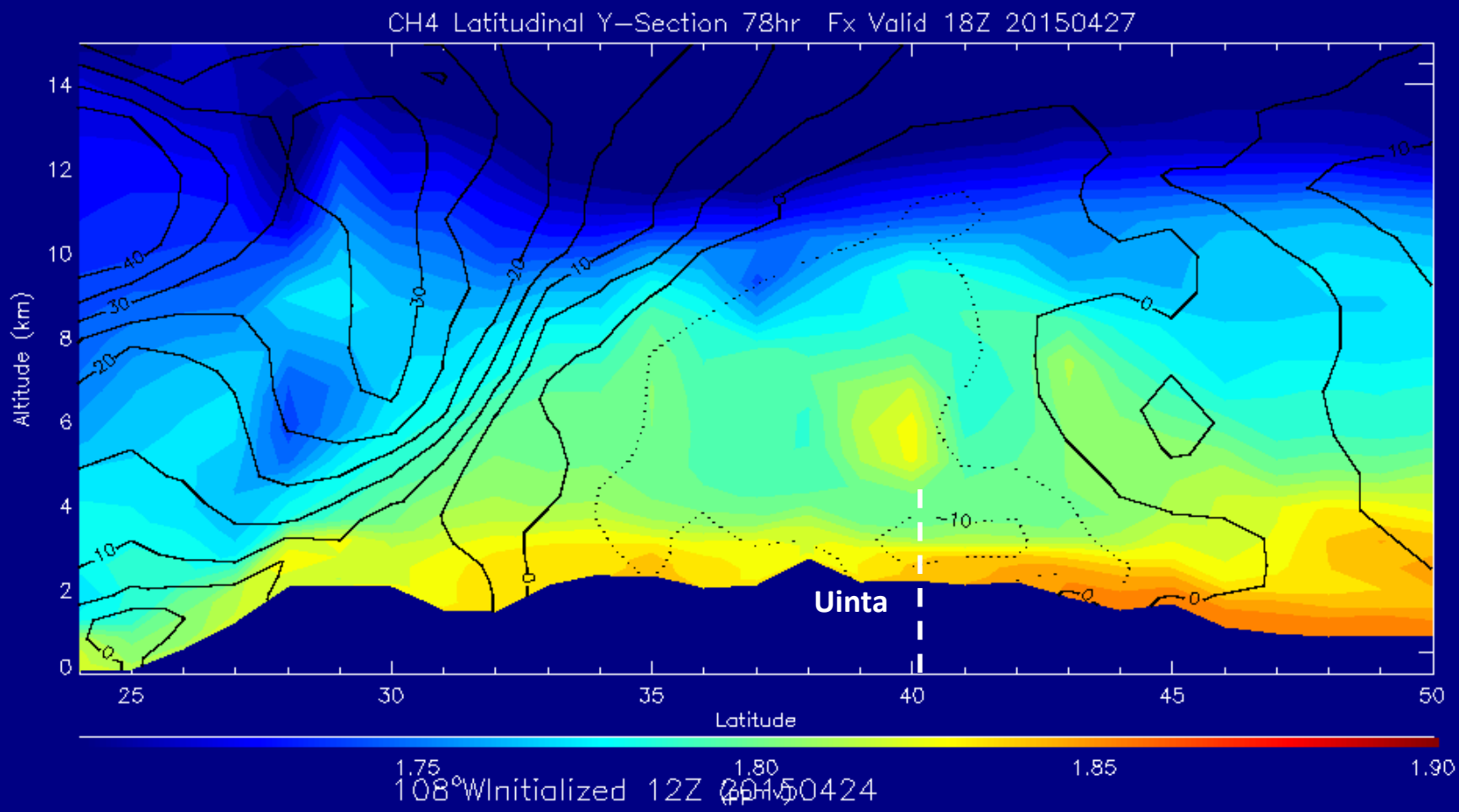
http://raqms.ssec.wisc.edu/forecast/view/20150424

RAQMS 78hr FX CO Cross-section at 108W (Western Colorado)



http://raqms.ssec.wisc.edu/forecast/view/20150424

RAQMS 78hr FX CH4 Cross-section at 108W (Western Colorado)



RAQMS surface CH4 constrained with 1990 mixing ratio – introduces ~0.1ppmv low bias